

26. ON A MISIDENTIFICATION OF THE MUD DAUBER WASP PARASITE
MACROSIAGON FERRUGINEUM (FABRICIUS) (COLEOPTERA: RHIPIPHORIDAE)
IN INDIA

During the course of my doctoral research on the phylogeny of the beetle family Rhipiphoridae, I found Srinivasan *et al.*'s (1999) note on the rearing of a rhipiphorid from the cells of eumenid wasps (Vespidae: Eumeninae) in India. The report is of great interest as very little is known about the bionomics and host preferences of rhipiphorids. However, the authors make several errors that lessen the value of this otherwise rare and important observation.

First and most importantly, the adult rhipiphorid pictured in Srinivasan *et al.* (1999) is not *Metoecus paradoxus* (Linnaeus) as the authors state, but quite likely *Macrosiagon ferrugineum* (Fabricius) given its host, locality, and colouration. *Metoecus* species are well known to be parasitoids of eusocial vespid wasps (Vespidae: Vespinae) (Heitmans and Peeters 1996, and references therein), not of solitary wasps as *Macrosiagon* species are (Falín 2002). Also, *Metoecus paradoxus*, a Palearctic species, is unknown in India though several *Macrosiagon* species, including *Macrosiagon ferrugineum*, are (Csiki 1913). Judging from the authors' description and the photograph, the beetle's tawny yellowish or reddish dorsal surface and black ventral aspects are diagnostic of *Macrosiagon ferrugineum*, a widespread species found from southern Europe and northern Africa to the Indian subcontinent (Csiki 1913).

Srinivasan *et al.* (1999) are also incorrect in stating that theirs is the first record of a rhipiphorid reared from eumenine cells in India. Horne and Smith (1872) reported rearing a rhipiphorid beetle from a cell of *Eumenes esuriens* Fabricius from northwest India. The parasitoid was determined only to the genus *Emenadia* (= *Macrosiagon*), though again, judging from the illustration provided, I believe this to be another example of *Ma. ferrugineum*. Chobaut (1891) reared this species under the name *Emenadia flabellata* (Fabricius) from *Odynerus* spp. (Vespidae: Eumeninae) cells in France; it appears that this species parasitizes several related eumenid

wasps in India as well.

Lastly, I cannot comment on the accuracy of the bionomic data provided by Srinivasan *et al.* (1999). However, I must add that contrary to the authors, rhipiphorids in the genera *Macrosiagon* and *Rhipiphorus* routinely successfully parasitize hymenopteran larvae within closed cells by using their mandibles to chew through the cell wall upon eclosion. True, they are occasionally trapped, particularly if the mud cells are unnaturally dried and hardened after being held in artificial laboratory conditions. Perhaps this is the phenomenon experienced by the authors.

I do not disparage the authors of their work. Rather, I encourage them and anyone to research the subject further and to continue reporting new information. Carefully reported collecting localities and dates, determination of host species, and other such bionomic facts regarding rhipiphorids would all be important and interesting additions to our knowledge of them. Rhipiphorids remain a fascinating yet poorly understood component of the Indian biota.

ACKNOWLEDGEMENT

I thank Dr. M. Engel of the Division of Entomology, K.U. Natural History Museum, for reviewing this manuscript prior to submission. This represents contribution no. 3286 from the Snow Entomological Collection, Division of Entomology, K.U. Natural History Museum, Lawrence, KS.

March 13, 2002

ZACHARY H. FALIN
Division of Entomology,
K.U. Natural History Museum
Snow Hall, 1460 Jayhawk Blvd.
Lawrence, KS, 66045-7523, U.S.A.
Email: zack@ku.edu

REFERENCES

- CHOBAUT, A. (1891): Moeurs et métamorphoses de *Emenadia flabellata* F. *Ann. Soc. Ent. France* 60: 447-456.
- CSIKI, E. (1913): Rhipiphoridae, Pars 54, 29 pp. In: *Coleopterorum Catalogus auspiciis et auxilio*, vol. 17, (Ed.: Schenkling, S.). W. Junk, Berlin.
- FALIN, Z.H. (2002): Rhipiphoridae. Pp. 431-444. In: *American Beetles*, vol. 2, (Eds: Arnett, R. Jr., M.C. Thomas, H. Frank and P.E. Skelley). CRC Press, Boca Raton, Florida.
- HEITMANS, W.R.B. & T.M.J. PEETERS (1996): *Metoecus paradoxus* in the Netherlands (Coleoptera: Rhipiphoridae). *Ent. Bericht., Amsterdam* 56: 109-117.
- HORNE, C. & F. SMITH (1872): Notes on the habits of some hymenopterous insects from the north-west provinces of India, with an appendix, containing descriptions of some new species of Apidae and Vespidae collected by Mr. Horne. *Trans. Zool. Soc. London* 7: 161-196, pls. 19-22.
- SRINIVASAN, G., K. SASIKALA & MOHANASUNDARAM (1999): Some observations on the biology of the parasitic beetle *Metoecus paradoxus* Linn. (Rhipiphoridae: Coleoptera) on mud dauber wasp grubs. *J. Bombay Nat. Hist. Soc.* 96: 337-338, 1 pl.